

## Variations in total solar and spectral irradiance during solar cycle 23

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Observations of total solar and spectral irradiance in near-UV (402 nm), visible (500 nm) and near-IR (862 nm) have been conducted by the SOHO VIRGO experiment since January 1996, providing information about irradiance changes during the minimum, rise, and maximum of solar cycle 23. Solar EUV and UV irradiance measurements are available for the same time interval by the SOHO/CELIAS/SEM and UARS/SUSIM experiments. Analysis of the SOHO/MDI images makes it also possible to compare irradiance variations with the evolution of magnetic structures, such as sunspots, faculae and the network. In this paper we study the spectral distribution of irradiance changes and their relation to magnetic activity. Results on longer-term variations between 1978 and 2001 are also presented.